

1. (Original) Replaceable grounding apparatus for test socket apparatus, comprising:

- a) an insert having opposed and essentially parallel first and second surfaces;
- b) a generally planar circuit board having opposed and essentially parallel first and second surfaces and a surface area larger than that of the insert;
- c) a handler having a planar handler element with an outer essentially first planar surface essentially parallel to an opposite outer essentially planar third surface, and a second planar surface located therebetween essentially parallel to the first and second surfaces and wherein:
  - i) the handler element has a first opening extending from the first to the second surfaces with the element being sized and arranged to accept the circuit board in a predetermined orientation and with the first plane of the circuit board essentially aligned with the first plane of the handler element and the second plane of the circuit board essentially aligned with the second plane of the handler element;
  - ii) the handler element having a second opening opposite the first opening extending between the second and the third surface with the insert and second opening being sized and arranged to accept the insert in a predetermined orientation and with the first surface of the insert aligned with the second plane of the fixed element, and the second surface of the insert aligned with the third plane of the handler element; and
- d) securing and releasing means for securing and releasing the insert with respect to the second opening.

2. (Original) Apparatus as in claim 1 wherein the insert is made of copper.

3. (Original) Apparatus as in claim 1 wherein the securing and releasing means comprises at least opposed grooves extending from the periphery between the first and second surfaces of the insert, and flexible projections extending inward from the second opening of the housing element arranged such that when the insert is in the preferred orientation and within the second opening the projections will engage the grooves.

4. (Original) Apparatus as in claim 3 wherein the insert surfaces have an essentially square shape.

5. (Original) Grounding apparatus as in claim 1 further comprising:

- a) the second surface of the circuit board having at least two ground connectors arranged such that when the circuit board is positioned within the first opening in the predetermined orientation the ground connectors will abut the second surface of the handler; and
- b) the insert having conductors extending from the first to the second surface of the insert numbered and located such that when the circuit board and the insert are mounted in their predetermined orientations respectively in the first and second openings of the handler element each ground connector on the second surface of the circuit board will be opposite a conductor.

6. (Original) Apparatus as in claim 5 wherein the insert is made of torlon.

7. (New) In automated test equipment utilizing a lead backer, test socket, test board and housing for testing a DUT interposed between the lead backer and test socket, the housing including a planar surface facing the lead backer with an opening into the housing forming a recess sized to receive the DUT in a coplanar relationship with the planar surface, a grounding connection improvement comprising:

a) an insert having opposed and essentially parallel surfaces with smaller surface areas than the recess opening;

b) the housing having an insert opening directly opposite the DUT recess extending inward to the DUT recess, the insert opening being sized and arranged to contain the insert with the outer surface of the insert aligned and parallel with the outer edge of the insert opening, with the opening being opposite at least a portion of the test board; and

c) securing and releasing means for securing and releasing the insert from within the insert opening.

8. (New) Apparatus as in claim 7 wherein the insert is made of copper.

9. (New) Apparatus as in claim 7 wherein the insert further comprises a groove around the periphery between its surfaces, and wherein the securing and releasing means comprises opposed flexible beads extending inwardly around the periphery of the insert opening arranged such that when the insert is within the insert opening the projections will engage the groove.

10. (New) Apparatus as in claim 9 wherein the insert surfaces have an essentially square shape.

11. (New) Apparatus as in claim 7 wherein the insert is made of non-conducting material.

12. (New) Apparatus as in claim 7 wherein the insert is made of torlon.

13. (New) Grounding apparatus as in claim 11 has at least two ground conducting paths extending between the planar surfaces with each conducting path which terminate at opposite parallel surfaces.